



ARC-OVER

MARCH 2020 EDITION

DMR vs Analog Terms

- Hi, this is Sebastian KBØTTL. Today we'll be going over the differences in terminology between **DMR terms and Analog terms**. On your AnyTone 868, 878, and 578 Radio. For the majority of this, we're going to be going over to the computer as I'm going to be showing you the various screens for programming and going over the terminology.

I was just going to go over the differences between the lingo dealing with analog channels and digital channels as far as amateur radio terms are concerned. So, first of all, I'm going to look at an analog channel, which I'm sure most of you have already seen on other, simpler radios back from a simpler day. We have the transmit and receive here, So this is a repeater out in independence, Missouri on a receive frequency of 147.690 transmit frequency of 147.690, this is a duplex frequency of course frequency pair versus a simplex frequency pair. We're gonna have this set for analog. We want the highest power available. And then we have a bandwidth of 25kHz. This repeater does not use CTCSS however, if it did, we could select a CTCSS setting from here as well. CTCSS were sub-audible tone which is an edited security feature for a lot of repeaters. Just basically keeping people that aren't necessarily familiar with ham radio operation from kerchunking or interfering with the repeater. So unless the sub-audible tone or CTCSS Tone on your radio matches the one they have on their repeater, he won't be able to access it. So it's a little bit of an extra security precaution.

So of course when you go to transmit on frequency repeater and everybody be able to hear what you're saying on Again, this is analog. This is not with the digital signal. Now looking over to one of the digital channels, the lingo changes here slightly. It is how all of these frequencies here are simplex. So basically this is set up for a hotspot. You can use a duplex frequency on a digital repeater or a simplex frequency on a digital hotspot. So here's a slight difference though, we're gonna have the set for digital. The bandwidth is actually narrow band on a DMR or digital repeater. We're going to use something called the color code instead of a CTCSS. Color code is something that the sys op on each repeater can set and it's a basically CTCSS except for digital meaning unless the color code that you're transmitting on matches the color code of the digital repeater, you're not going to be able to gain access so we're looking at color code selective low from code one or actually zero rather zero through 15 color code.

There's also a time slot, on each digital repeater. You're capable of having two conversations taking place on that same repeater at one time, one on time slot one and one on time slot two as digital streams are concerned. Keep in mind most repeaters have designated one of the time slots for normal repeater traffic and the other time slot for talk groups for DMR talk group access. And it's best not to get those two confused. As the sys op of the repeater can actually have your DMR ID number banned from a repeater if you're using the wrong time slot. So make sure that if you're supposed to be talking, net roofs and things of that nature only on time slot one, that's all you're using time slot one for a vice versa if it's time slot two, but the other time slot is typically open on said repeaters, for use for digital communications on the talk groups.

DMR vs Analog Terms (continued)

So there you have some of the differences between Digital and Analog Terms.

Also, you're gonna need to select your talk group. You most likely upload a talk group list from

Again. My name is Sebastian KBZØTTL. Thank you for watching. If you like today's video, be sure to like us on Facebook and subscribe to our YouTube channel, 73.

Now we Know !

Remember last year when Dick K6SUU went to India on his enlightenment trip experiencing various forms of meditation practiced by the Indian Culture... We now have the results of that endeavor..



Meeting of the Turlock Amateur Radio Club
February 11, 2020 @ 7PM
Salvation Army Facility, 893 Lander Ave, Turlock

Meeting called to order at 7:00 pm by President Bambi Schmidt (KI6YQL) with 27 members and guests in attendance.

Vice President's Report:

Vice President Dick Decker (K6SUU) – Dick reported on the program survey from last month's meeting. Dick also gave us an overview of his DMR worldwide net which is now the largest in the world. He is looking for an assistant to share net control duties as there are so many check ins it is becoming too much for one person.

Upcoming meeting programs will be on HF radios and antennas by Spencer Boyd (KJ6ART) in May and Valley linked repeaters by Grady Williams (K6IXA) month tbd.

Membership Chairman's Report:

John Sims (N6JCS) was not present. No report.

Treasurer's Report:

Mike Smith (KG6VFL) not present. No report.

Secretary's Report:

President Bambi Schmidt (KI6YQL) entertained a motion to accept the minutes from the January meeting as distributed via email. Motion by Grady Williams (K6IXA) to approve as published with second by Don Stephens (KM6ARR). Motion carried.

Repeater Chairman's Report:

Grady Williams (K6IXA) reported that the 220MHz has been repaired and is ready to be reinstalled. All else is good.

ArcOver Publisher's Report:

Items for the ArcOver are due by February 17, 2020.

Old Business:

President Bambi Schmidt (KI6YQL) continued the discussion of the 2020 Field Day from last month. After a brief discussion, Terry Barrett (KJ6DXT) volunteered to be Field Day chairman. The field day site still needs to be determined. More to follow.

New Business:

Spencer Boyd (KJ6ART) reported on the upcoming Turlock Chaplaincy Fun Run that will be March 28 around the Stanislaus State University campus. A volunteer is needed to take the lead and organize the club efforts. About 6-8 additional volunteers are needed to provide the communications for the event. More to follow at the next meeting.

Club dues for 2020 are now due. Please send your check and renewal form via US mail to the club PO Box or bring to the next meeting.

Motion to adjourn by Walter Schmidt (KI6PBL) and seconded by Mike Johnson (KD6BGO). Meeting adjourned by President Bambi Schmidt (KI6YQL) at 7:15pm.

Minutes respectfully submitted by Secretary Greg Back (WA6LGS).

Program:

The program this evening was a presentation on "Batteries for Hams – Theory and Practical Applications" by Greg Back (WA6LGS).

Playboy or License Manual

Many years ago in the telephone business our repairmen out in the field relied upon a centralized testboard. A very accurate although somewhat ineffective means of determining the integrity of the wire facility that ultimately served the end telephone customer. Outside plant consisted of what was termed as an underground cable coming out of the office. It was terminated in a distribution box called a "B" box. Which could be ground mounted however at that time most were on a telephone pole. Connections could then be made between the underground feeder to numerous ariel distribution cables ultimately feeding ariel terminals from which the drop wires going to the residence was terminated.

Quite often especially in wet weather affecting cable integrity the repairman would be sitting on the "B" box platform waiting his turn at the test board. To occupy time reading material was often produced to occupy the time. Quite often Playboy was a preferred editorial enlightenment. HOWEVER there was an exception to this norm, a guy named Ed Rodrigues. Can you believe it, during his wait time he whipped out an ARRL license manual poring over the questions and answers.

At that time I supervised the Merced PBX repair group which in addition to taking care of all the business accounts, we had the Mobile Radio, Mobile Telephone, Data Services and Teletype communications. So when it was determined that we needed additional personnel, I had to decide do I want a guy who reads Playboy or a License Manual to beef up the radio part of our operation. Hmmm no trouble making that choice. We welcomed Ed to the group with a promotion (more money) and an eagerness to learn. In a short time he had his amateur and commercial license. I had the privilege of issuing his technician examination, we could do that back then. For his code examination I sent him some generic text ending up with, Ed if you can read this you just passed. You should have seen the grin on his face

Ed was an excellent craftsman and was instrumental in dragging me into the computer age. When I retired in 1990 I was responsible for seven shops covering all two-way radio and microwave comms from Lodi to Edwards Air Force Base including coastal locations from San Jose to San Luis Obispo. Upon retiring Ed replaced me as Supervisor of the Central Valley District. Read a License Manual or Playboy? Ask ED... BTW Management retirement is a tad more lucrative than craft... OH YEAH...

Ed KB6DRN recently sent me the following picture and note:

You apparently didn't train me well as a Ham but you must have scared the absolute be-jesus out of me when it comes to neat wiring.

This view is the back of Ed's Ham station, makes me somewhat ashamed of the myriad of tangled wires I'm currently in the midst of...

K6IXA Editor



Turlock Amateur Radio Club Spring (Estate) Auction

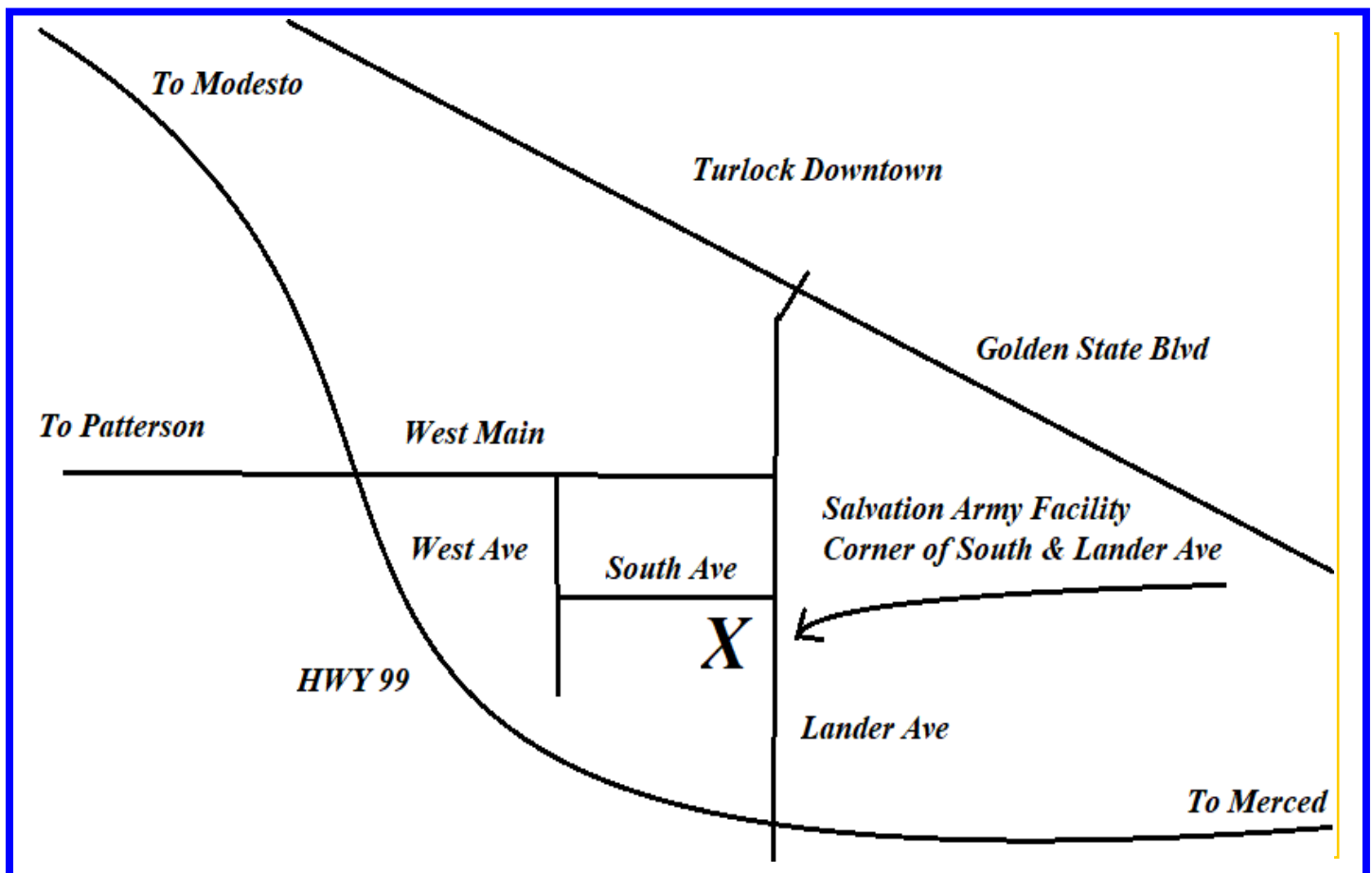
Check pictures at www.w6bxn.org/auction/
Additional Items pending

Saturday April 18 2020

Doors open 8:00 am, Auction begins at 9:00

Lunch Fixins, Tri-Tipery - Tri-Tip sammiches...

Salvation Army Facility
893 Lander Ave
Turlock CA



Linked Repeater Systems

OUTLINE FOR PROGRAM, MARCH 10th MEETING

[The Rabbit Radio Network](#)

This is part of the Cactus Intertie?

[The Cactus Intertie System](#)

A closed, private amateur radio system consisting of a large number of remotely controlled base stations. It covers large portions of California, Arizona, New Mexico, Nevada, Utah, Colorado and Texas. Additional coverage is now available in the Washington D.C. and the surrounding area of Maryland, Virginia and West Virginia, Pennsylvania and Delaware, however it is not linked to the rest of the system on a full time basis yet.

[Calnet](#)

The Calnet system consists of several fulltime linked 440 Mhz repeaters connecting San Diego to San Francisco and Tahoe. Dues are \$125 per year.

[The Condor Connection](#)

An open, 222 MHz network of linked repeaters throughout California and into Las Vegas, Reno, and Phoenix as well. Local nodes include San Francisco and San Jose.

[Western Amateur Linking Association](#)

WALA links repeaters in all sorts of bands, including 2 meter, 222 MHz, 440 MHz, and even 1.2 GHz.

[The WIN SYSTEM](#)

The WIN SYSTEM is a series of linked, or Intertied, UHF (440 MHz, or 70 cm) repeaters that cover a great deal of California. The WIN SYSTEM is owned and operated by Shorty, K6JSI, with a lot of help from the WIN SYSTEM membership.

[W6RLW 1.2 Ghz linked system](#)

This 1.2 GHz repeater network covers a really wide area.

[IRLP \(Internet Radio Linking Project\)](#)

The IRLP uses Voice-Over-IP (VoIP) custom software and hardware. IRLP links simplex radios or repeaters to each other via the Internet.

[EchoLink](#)

EchoLink software allows licensed Amateur Radio stations to communicate with one another over the Internet, using voice-over-IP (VoIP) technology. The program allows worldwide connections to be made between stations, or from computer to station, greatly enhancing Amateur Radio's communications capabilities. There are more than 130,000 registered users in 150 nations worldwide!

[WIRES II](#)

Similar in scope to IRLP and EchoLink, WIRES II is an Internet radio linking system created by Yaesu (a.k.a. Vertex Standard).

This page found at <https://www.paara.org/pages/res-repeater.html>



Grady L. Williams K6IXA
Turlock ARC, W6BXN
Dear Fellow Ham,

The Sierra Foothills Amateur Radio Club is hosting our 6th Annual Hamfest in Loomis, California, on Saturday, March 21st, 2020! We are proud to call this a sanctioned ARRL Event.

This year our featured presentation isn't a presentation, but a **workshop** on **DStar, DMR, Fusion, and Hot Spots**. We will have a table dedicated to each mode. Elmers will be there to explain how these systems work and will have everything on hand to program your member's radios!! We anticipate this to be a very popular program and are excited to make it available to you.

Please follow this [LINK](#) to our flyer with all the pertinent information. Additional information is available on our website at W6EK.org.

Please email and pass out the flyer to your members. Also, if you would be so kind as to make an announcement on your Club net. We want any ham interested to have the opportunity to come.

Thank you and we look forward to seeing you and your members at Loomis Hamfest 2020!

73

Orion Endres, AI6JB
Loomis Hamfest 2020 Chair
ai6jb@arrrl.net

AUCTION NOTE

If you have been contemplating recirculating your ham shack equipment, this might be a good time to do so... If you have something you wish to sell, please send pictures and equipment list to gradyw@elite.net to have them included on the web page prior to the auction. Remember one guys junk could be another's treasure. Come bring excess equipment to sell and don't forget to bring a new ham friend with lots of money... C U There...

K6IXA Editor